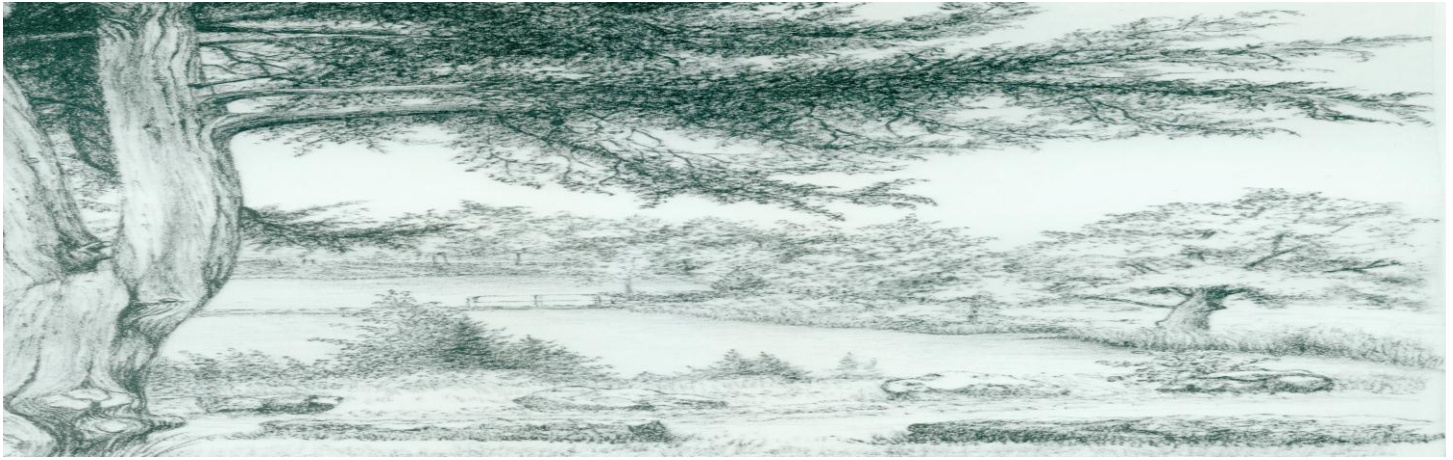




Unit: Ecotones



Introduction to the Unit

This lesson will introduce students to the concept of an *ecotone*. Here at Chickasaw National Recreation Area, two very different plant and animal communities come together. It is here where the eastern forests meet the western prairies.

In this very special meeting place, the landscape is abundant in diversity and richness. Students will explore the different kinds of ecotones that exist and the different plant and animal communities of Chickasaw National Recreation Area

Teacher Background

Oklahoma is often thought of as a prairie state. This is true for the drier western portion of the state, but the wetter eastern half is home to native forests that cover the hills and valleys. Here at Chickasaw National Recreation Area, these two different areas come together to create a type of landscape abundant in diversity and richness. This area is called an ecotone.

Chickasaw National Recreation Area is in south central Oklahoma at the juncture of the southern Osage Plains and the Arbuckle Mountains. The recreation area is comprised of the lands of the former Platt National Park (the Platt District), lands acquired by the Bureau of Reclamation for the Arbuckles Reservoir project (the Lake District), and approximately 1,500 acres connecting these two areas.

The topography of the recreation area is moderately rolling terrain with several

Chickasaw National Recreation Area lies in a transitional zone between the eastern deciduous forest and the mixed grass or mid grass type prairie/grassland. More than 600 different plant species have been identified in the recreation area. Here in Southern Oklahoma, two natural communities meet.

The ecotone of the hardwood forest and prairies is evident in Chickasaw National Recreation Area and through the Arbuckle Mountain region. As you walk the trails in the park or drive the highways and roads of the Arbuckles you will notice this ecotone. Some places will have patches of prairie nestled in among the forest and in other areas you will find signal trees or small groups of trees growing in the prairie units. The springs, streams, and wetlands in the lowlands of this region feed a lush green riparian forest floor that is conducive to the growth of many forest plants, trees and shrubs. The upland positions of this region will be dominated with the grasses, wildflowers, occasional trees, and forest plants growing in some upland places. This mixture of the prairie and forest gives evidence of this unique ecotone and gives the Arbuckle Mountain region a special identity in the natural world. Trees and other plants are a major

steep bluffs in the northern portion and level terrain on the upland areas in the southern portion. Steeper valley walls line Arbuckles Reservoir with bluffs along lengthy sections, especially on the sides of the Rock Creek arm.

source of energy on the land. They capture energy from the sun and make food.

Pre-Visit Activity	Create a Food Chain - To help students understand that almost all kinds of animals' food can be traced back to plants and that the sun is often the ultimate source	of energy needed for all organisms to stay alive and grow.
In Park Activities Ranger Lead	Forest Ecology –Pavilion Springs down Veterans Center Trail- passes	through an area where the eastern deciduous forest meets western mixed-grass prairie.
School Activities Ranger Lead	Discussion of ecotones and sample of animals and pictures to represent	both the eastern diciduous forest and the western pariaire.
In Park Activities Teacher Lead	A hike down Veterans Lake trail to view the hardwood forest and an example of the prairie.	
Post Visit Activities Teacher Lead	Create your own Ecotone - Ecotones are the transition zones between two distinct communities or ecosystems. These edge habitats typically have a greater diversity of species than the neighboring communities.	Many species of plant and animals require a heterogeneous mixture of habitat, and thus flourish in these areas. Students will create their own ecotone.
Key Vocabulary	Ecotone, Ecosystem, Plants, Prairie, Grassland, Forest, Diversity, Heterogeneous, Community,	Food Chain, Herbivore, Carnivore, Omnivore, and Decomposer
Oklahoma PASS Standards	Grade 1- 12 Science Process Standard 2 & Process Standard 4 Kindergarten Modes and Forms of Writing: Standard 2 Research and Information Standard 8 Oral Language/Listening and Speaking: Standard 1, Standard 2, & Standard 3 Grade 1 – Life Science - Standard 2 Grade 2- Life Science - Standard 2	Grade 3 - Life Science - Standard 2 Grade 4 – Life Science - Standard 4 Grade 5 – Life Science - Standard 2 Grade 6 – Life Science - Standard 4 Grade 7 – Life Science - Standard 2 Grade 8 – Life Science - Standard 3 High School – Environmental Science - Standard 2 & Standard 3

Essential Questions

1. What is your role or responsibility in perseverance of a habitat?

2. What are an ecotone, herbivore, carnivore, omnivore, and decomposer?

Other Suggested Activities

Food Web
Endangered Species Activities
Threatened Species Activities

Recycling – Earth Day
Plants or Tree Identification
Leaf Rubbing